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# Acute Coronary Syndromes

## PROGNOSTIC IMPLICATIONS OF TYPE 2 MYOCARDIAL INFARCTION IN VASOSPASTIC ANGINA: A HIGH-RISK SUBGROUP

Poster Contributions
Hall C
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Session Title: Acute Coronary Syndromes: NSTEMI
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**Background:** Current universal definition classifies myocardial infarction into 5 types, and vasospasm is indicated as a cause of type 2 myocardial infarction (T2MI). Prognosis of vasospastic angina (VSA) is considered to be excellent; however, clinical implications of T2MI on prognosis in VSA patients are unknown.

**Methods:** We retrospectively studied 171 consecutive definite VSA patients (median age, 64 years; 55.0% male) who had chest pain with cardiac troponin I (TnI) measurement between 2005 and 2013 in our institution. Definite VSA was diagnosed according to the Japanese Circulation Society guidelines. The cohorts were divided into two groups, T2MI and non-T2MI group. T2MI was diagnosed if the serum TnI value was above the 99 percentile upper reference limit. The primary endpoint, major adverse cardiac event (MACE), was compared between T2MI group and non-T2MI group patients.

**Results:** Forty-two (24.6%) patients were diagnosed as T2MI, and followed-up for median 45.6 months. During follow-up, the T2MI group had a higher incidence of MACE compared with the non-T2MI group (23.8% vs 5.4%, P = 0.002). We adjusted by Japanese Coronary Spasm Association (JCSA) risk factors for MACE (history of out-of-hospital cardiac arrest, smoking, angina at rest alone, organic coronary disease, multivessels spasm, ST-segment elevation during angina, and beta-blocker use), however, T2MI remained a strong predictor for MACE (HR: 4.36, 95% CI: 1.51-12.6, P = 0.006). The area under the curve of MACE-predicting model constructed only by JCSA risk factors increased slightly but non-significantly by adding T2MI (from 0.83 to 0.86, P = 0.51). However, addition of T2MI diagnosis improved both net reclassification improvement (0.77, 95% CI: 0.29-1.26, P = 0.002), and the integrated discrimination improvement (0.056, 95% CI: 0.003-0.108, P = 0.037) for predicting MACE in VSA patients.

**Conclusions:** Approximately, a quarter of VSA patient were associated with T2MI, and the prognosis of this population is not "excellent". This population may need to be identified as new high-risk subgroup of VSA patients and may require an alternative treatment strategy.